WHAT IS CLAIMED:

1. A method for use in a communications endpoint, the method comprising the steps of:

determining a signature of a communications channel;

performing power control over the communications channel wherein the power control compares a metric value and a target metric value, such that the target metric value is adjusted as a function of the determined signature of the communications channel.

2. The method of claim 1 wherein the metric is a bit error rate (BER).

3. The method of claim 1 wherein the signature of the communications channel is a second order statistic of a received signal-to-noise ratio (SNR).

4. The method of claim 1 wherein the determining step includes the steps of:

collecting signal-to-noise (SNR) values of a signal received from the communications channel; and

using the collected SNR values to determine the signature of the communications channel.

5. The method of claim 4 wherein the using step determines the signature of the communications channel by calculating a second order statistic of the collected SNR values.

6. The method of claim 1 wherein the communications endpoint is a wireless endpoint.

7. The method of claim 1 wherein the metric is a symbol error count.

8. The method of claim 7 wherein the determining step includes the step of monitoring a symbol error count of a received signal for determining a standard deviation of the received symbol error count; and the performing step includes the step of adjusting a target symbol error count for the received signal as a function of the standard deviation

for use in providing the power control.

9. The method of claim 1 wherein the determining step includes the steps of:

monitoring a symbol error count of a received signal for determining a standard deviation of a received symbol error count;

setting a target symbol error rate as a function of the standard deviation; and

wherein the performing step includes the step of

adjusting a target signal-to-noise ratio for the received signal depending on the difference between the set target symbol error rate and the actual symbol error count produced by the receiver.

10. The method of claim 1 wherein the performing power control step performs symbol error count based reverse outer loop power control with adaptive symbol error rate targets.

11. A method for use in a communications endpoint, the method comprising the steps of:

receiving a signal from a wireless endpoint;

developing a second order statistic from the received signal; and

performing power control with the wireless endpoint as a function of the second order statistic.

12. The method of claim 11 wherein

the developing step includes the steps of:

calculating a second order statistic of a signal-to-noise ratio (SNR) of the received signal; and

adjusting a bit error rate target value as a function of the calculated second order statistic;

and the performing step includes the step of performing reverse-link outer loop power control as a function of a comparison between a bit error rate value of the received signal and the adjusted bit error rate target value.

13. The method of claim 11 wherein the communications endpoint is a wireless

endpoint.

14. The method of claim 11 wherein the power control is a symbol error count based power control.

15. The method of claim 11 wherein the developing step includes the step of monitoring a symbol error count of the received signal for determining a standard deviation of the received symbol error count; and the performing step includes the step of adjusting a target symbol error count for the received signal as a function of the standard deviation for use in providing the power control.

16. The method of claim 11 wherein the developing step includes the steps of:

monitoring a symbol error count of the received signal for determining a standard deviation of the received symbol error count;

setting a target symbol error rate as a function of the standard deviation; and

the performing step includes the step of adjusting a target signal-to-noise ratio for the received signal depending on the difference between the set target symbol error rate and the actual symbol error count produced by the receiver.

17. A method for use in a communications endpoint, the method comprising the steps of:

measuring a signature of a fading environment;

performing power control by adjusting a target metric value as a function of the measured signature.

18. The method of claim 17 wherein the measuring step includes the step of using a signal-to-noise ratio (SNR) of a received signal to measure the fading environment.

19. The method of claim 17 wherein the measuring step includes the step of calculating a standard deviation value of the SNR, and wherein the performing step uses the standard deviation value of the SNR to adjust the target metric value.

20. The method of claim 17 wherein the metric value is a bit error rate (BER).

21. The method of claim 17 wherein the performing step adds a value to a signal-to-noise ratio (SNR) target value, wherein the added value is selected as a function of the measured signature of the fading environment.

22. The method of claim 17 wherein the performing step includes the steps of:

estimating a bit error rate (BER);

comparing the estimated BER to a target BER value; and

adjusting a target signal-to-noise ratio value as a result of the comparison by adding a value to the target signal-to-noise ratio;

wherein the value added to the target signal-to-noise-ratio is selected as a function of the measured signature.

23. The method of claim 17 wherein the communications endpoint is a wireless endpoint.

24. An apparatus for use in a communication endpoint, the apparatus comprising:

a receiver for receiving a signal;

a controller for (a) developing a signature of the communications channel from the received signal; and (b) performing power control over the communications channel by adjusting a target metric value as a function of the signature of the communications channel.

25. The apparatus of claim 24 further comprising a decoder for decoding the received signal and wherein the metric is a bit error rate (BER) of the decoded received signal.

26 The apparatus of claim 24 wherein the controller further determines the signature of the communications channel by collecting signal-to-noise ratio (SNR) values of the received signal.

27. The apparatus of claim 26 wherein the controller further determines the signature of the communications channel by calculating a second order statistic of the

collected SNRs.

28. The apparatus of claim 27 further comprising a memory for storing a look-up table which maps values of the second order statistic to adjustment values for use in adjusting the target metric value.

29. The apparatus of claim 24 wherein the metric value is signal-to-noise (SNR).

30. The apparatus of claim 24 wherein the target metric value is a target signal-to-noise ratio (SNR) and the controller adjusts the SNR target value by adding a value to the SNR target value, wherein the added value is selected as a function of the developed signature.

31. The apparatus of claim 24 wherein the communications endpoint is a wireless endpoint.

32. The apparatus of claim 24 wherein the metric is a symbol error count.

33. The apparatus of claim 24 wherein the controller monitors a symbol error count of the received signal for determining a standard deviation of the received symbol error count; and adjusts a target symbol error count for the received signal as a function of the standard deviation for use in providing the power control.

34. An apparatus for use in a communications endpoint, the apparatus comprising:

a decoder for decoding a frame of a received signal and for providing a signal representative of log-likelihood ratios with respect to information bits of the decoded frame;

a bit error estimate generator responsive to the signal representative of the log-likelihood ratios for providing a bit error rate estimate; and

a processor for performing reverse outer loop power control (ROLPC) over a communications channel wherein the ROLPC performs a comparison between the bit error rate estimate and a target bit error rate value such that the target bit error rate value is adjusted as a function of a signature of the communications channel.

35. The apparatus of claim 34 wherein the processor further determines the signature of the communications channel by calculating a second order statistic of a received signal-to-noise ratio (SNR).

36. The apparatus of claim 35 further comprising a memory for storing a look-up table which maps values of the second order statistic to adjustment values for use in adjusting the target bit error rate value.

37. The apparatus of claim 34 wherein the communications endpoint is a wireless endpoint.

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38. Apparatus for use in equipment for providing power control in a cellular system, the apparatus comprising:

a receiver for receiving a signal from a wireless endpoint;

a controller for (a) developing a second order statistic from the received signal; and (b) performing power control with the wireless endpoint as a function of the second order statistic.

39. The apparatus of claim 38 wherein the controller calculates a second order statistic value of collected signal-to-noise ratio values (SNRs) of the received signals, which is used to determine the adjustment to a target metric value.

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40. The apparatus of claim 39 wherein the metric value is a bit error rate (BER).

41. The apparatus of claim 38 wherein the power control is a symbol error count based power control.

42. The apparatus of claim 38 wherein the controller monitors a symbol error count of the received signal for determining a standard deviation of the received symbol error count; and adjusts a target symbol error count for the received signal as a function of the standard deviation for use in providing the power control.

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43. The apparatus of claim 38 further comprising a transmitter for transmitting power control information to the mobile station.